

REMARKS

Claims 1, 13, 19, 23, 27, and 46 are amended, no claims are canceled, and no claims are added; as a result, claims 1-61 are now pending in this application.

No new matter has been added through the amendments to claims 1, 13, 19, 23, 27, and 46. Support for the amendments to claims 1, 13, 19, 23, 27, and 46 may be found throughout the specification, for example but not limited to the specification on page 5, line 25 through page 6, line 6, and in but not limited to FIG. 6.

§103 Rejection of the Claims

Claims 1, 3, 5, 7, 8-10, 12-16, 18-24, 27-31, 33, 36, 39-50, 52, 53, and 55-56

Claims 1, 3, 5, 7, 8-10, 12-16, 18-24, 27-31, 33, 36, 39-50, 52, 53, and 55-56 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Collins et al. in view of Sakakibara et al. (U.S. 4,681,712).

Claims 1, 3, 5, 7, 8-10, 12-16, 18-24, 27-31, 33, 36, 39-50, 52, 53, and 55-56 are not obvious, and thus are patentable over the proposed combination of Collins et al. and Sakakibara et al. because the proposed combination of Collins et al. and Sakakibara et al. fails to teach or suggest each of the elements included in claims 1, 3, 5, 7, 8-10, 12-16, 18-24, 27-31, 33, 36, 39-50, 52, 53, and 55-56. For example, claim 1 as now amended recites,

An electromagnetic interference (EMI) shield comprising:
a waveguide body including an array of waveguide cells each having a contiguous inner surface; and
a single layer covering at least a portion of each contiguous inner surface, the single layer including an absorber layer including an epoxy resin with particles having a high magnetic loss tangent covering at least a portion of each contiguous inner surface and capable of absorbing electromagnetic radiation over a select frequency range.
(Emphasis added).

In contrast, Collins et al. at column 2, lines 59-61 states,

A conductive layer is coated on at least a surface of the non-conductive plate interior to the enclosure and on the walls of the tunnel openings.

Collins et al. further at column 4, lines 11-17 states,

Shield plate 14, rails 17, finger 19 and 20 are preferably a molded plastic, single piece. The entire molded piece 24 is plated with a conductive material. Preferably, piece 24 is plated with copper and then a layer of nickel over the copper. The entirety of piece 24, including the shield, the interior of the holes, the rails 17, the fingers 19 and 20, the protuberances 21 are all plated with nickel over copper.

However, there is no disclosure in Collins et al. of " **a single layer** covering at least a portion of each contiguous inner surface, the single layer including an **absorber layer** including an epoxy resin with particles having a high magnetic loss tangent covering at least a portion of each contiguous inner surface and **capable of absorbing electromagnetic radiation over a select frequency range**," as recited in claim 1. The Office Action on page 2 refers to Collins et al. at column 3, lines 29-34. However and in contrast, Collins et al. at column 3, lines 29-34 recites,

The great advantage and utility of **the EMI shield** in the present invention is that a low cost EMI shield, that is easy to manufacture, is provided and the shield provides for a cooling air flow and electromagnetic radiation shielding at frequencies up to several gigahertz. (Emphasis added).

Thus, Collins et al. discloses that the EMI shield provides electromagnetic radiation shielding at frequencies up to several gigahertz. Collins et al. goes on at column 4, lines 41-44 to state,

The holes 18 in shield plate 14 are designed to be a waveguide attenuators. Thus, the **diameter of the holes and the thickness of the shield plate are designed to attenuate electromagnetic radiation at very high frequencies**. For the highest frequency to be attenuated, **the thickness, T, of plate 14 and the diameter, D, of holes 18 is chosen to satisfy the tunnel attenuation shielding effectiveness** which is $32 \cdot T \cdot D \cdot \sqrt{N}$. (Emphasis added)

Thus, Collins et al. discloses that the diameter of the holes and the thickness of the shield plate are chosen to satisfy the tunnel attenuation shielding effectiveness. However, there is no disclosure in Collins et al. of "an **absorber layer** including an epoxy resin with particles having

a high magnetic loss tangent covering at least a portion of each contiguous inner surface and **capable of absorbing electromagnetic radiation over a select frequency range,"** as recited in claim 1.

Also in contrast to claim 1, Sakakibara et al. discloses at column 2, line 13-21,

The third object of the present invention is to provide a molding method for plastics, whereby **a multilayer coating comprising an electrically conductive coating layer and a wave absorbing coating layer** capable of absorbing electromagnetic waves of a high frequency region and in some cases also capable of providing a function to prevent the electrification or the electric leak of the electrically conductive coating layer, is formed. (Emphasis added).

Thus, Sakakibara et al. discloses an multilayer coating comprising an electrically conductive coating layer and a wave absorbing coating layer, but fails to disclose "a single layer covering at least a portion of each contiguous inner surface, the single layer including an absorber layer including an epoxy resin with particles having a high magnetic loss tangent covering at least a portion of each contiguous inner surface and capable of absorbing electromagnetic radiation over a select frequency range," as recited in claim 1.

Further, there is no disclosure in Sakakibara et al. of "a waveguide body including an array of waveguide cells each having a contiguous inner surface," as recited in claim 1. Therefore, there is no disclosure in Sakakibara et al. of any layer covering at least a portion of "each contiguous inner surface," as recited in claim 1.

Because neither Collins et al. nor Sakakibara et al., either alone or in combination, teach or suggest each of the elements included in claim 1, claim 1 is not obvious in view of the proposed combination of Collins et al. and Sakakibara et al.

In further examples of claims where the proposed combination of Collins et al. and Sakakibara et al. fails to disclose the elements included in the claims:

Claim 13 as now amended recites,

An electromagnetic interference (EMI) shield, comprising:
an array of waveguide cells each having a contiguous inner surface;

a single layer covering at least a portion of each contiguous inner surface, the single layer including an absorber layer including an epoxy resin with particles having a

high magnetic loss tangent covering at least a portion of each contiguous inner surface, the absorber layer capable of absorbing electromagnetic radiation over a select frequency range. (Emphasis added).

Claims 19 as now amended recites,

An electromagnetic interference (EMI) shield for a computer, comprising:

a metal chassis having an aperture, the chassis adapted to enclose portions of the computer that generates heat and EMI over a select frequency range; and

an EMI waveguide shield fixed to the chassis and covering the aperture, the EMI waveguide shield including an array of waveguide cells each having a contiguous inner surface, **and a single layer covering at least a portion of each contiguous inner surface, the single layer including an absorber layer** including an epoxy resin with particles having a high magnetic loss tangent covering at least a portion of each contiguous inner surface, the absorber layer capable of absorbing the EMI. (Emphasis added).

Claim 23 as now amended recites,

A method of reducing electromagnetic interference (EMI) from a computer, comprising:

enclosing portions of the computer that generate heat and EMI over a select frequency range with a metal chassis having an interior;

introducing the EMI and heat to an array of waveguide cells fixed to the chassis, each waveguide cell having an aperture leading from the interior and a contiguous inner surface at least partially coated with **a single layer, the single layer including an absorber layer** including an epoxy resin with particles having a high magnetic loss tangent that absorbs the EMI over the select frequency range; and

absorbing the EMI with the absorber layer to substantially contain the EMI within the interior, while allowing the heat to pass from the interior through each aperture. (Emphasis added).

Claim 27 as now amended recites,

An electromagnetic interference (EMI) shield comprising:

an insulating substrate having a plurality of apertures;

absorbing waveguide means including **a single layer, the single layer including an epoxy layer covering at least a portion**

of the substrate for absorbing electromagnetic radiation over a select frequency range. (Emphasis added).

Claim 46 as now amended recites,

An apparatus having an electromagnetic interference (EMI) shield, comprising:

a computer enclosure, the computer enclosure including a vent having a plurality of apertures and a shape that provide ventilation from an interior of the enclosure to outside while reducing EMI emissions through the vent, wherein the vent includes **a single layer, the single layer including an EMI-absorbent material** including an epoxy resin with particles having a high magnetic loss tangent capable of absorbing electromagnetic radiation over a select frequency range. (Emphasis added).

For reasons analogous to those stated above with respect to claim 1, the proposed combination of Collins et al. and Sakakibara et al. fails to teach or suggest each of the elements included in claims 13, 19, 23, 27, and 46. Because the proposed combination of Collins et al. and Sakakibara et al. fails to teach or suggest each of the elements included in claims 13, 19, 23, 27, and 46, the 35 U.S.C. § 103 rejection of claims 13, 19, 23, 27, and 46 cannot stand.

Claims 3, 5, 7-10, 12, and 45 depend from claim 1, and so include all of the elements included in claim 1. Claims 14-16, 18, and 20 depend from claim 13, and so include all of the elements included in claim 13. Claims 21-22 depend from claim 19, and so include all of the elements included in claim 19. Claim 24 depends from claim 23, and so includes all of the elements included in claim 23. Claims 28-31, 33, 36, and 39-44 depend from claim 27, and so include all of the elements recited in claim 27. Claims 47-50, 52-53, and 55-56 depend from claim 46, and so include all of the elements included in claim 46.

For at least the reasons stated above with respect to claims 1, 13, 19, 23, 27, and 46, the proposed combination of Collins et al. and Sakakibara et al. fails to teach or suggest all of the elements included in each of claims 3, 5, 7-10, 12, 14-16, 18, 20-22, 24, 28-31, 33, 36, 39-45, 47-50, 52-53, and 55-56. Because the proposed combination of Collins et al. and Sakakibara et al. fails to teach or suggest all of the elements in claims 3, 5, 7-10, 12, 14-16, 18, 20-22, 24, 28-31, 33, 36, 39-45, 47-50, 52-53, and 55-56, the 35 U.S.C. § 103(a) rejection of these claims cannot stand.

For at least the reasons stated above, Applicant respectfully requests withdrawal of the 35 U.S.C. §103(a) rejection, and reconsideration and allowance of claims 1, 3, 5, 7, 8-10, 12-16, 18-24, 27-31, 33, 36, 39-50, 52, 53, and 55-56.

Claims 3, 4, 12, 15, 35, and 54

Claims 2, 4, 15, 35, 12, and 54 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Collins et al. and Sakakibara et al. (U.S. 4,681,712) in view of Mitchell (U.S. 6,426,459).

Claims 2, 4, and 12 depend from claim 1, and so include all of the elements recited in claim 1. Claim 15 depends from claim 13, and so includes all of the elements recited in claim 13. Claim 35 depends from claim 27, and so includes all of the elements recited in claim 27. Claim 54 depends from claim 46, and so includes all of the elements recited in claim 46.

Applicant believes they have established that the proposed combination of Collins et al. and Sakakibara et al. fails to teach or suggest each of the elements included in claim 1, and fails to teach or suggest each of the elements included in claim 13, and fails to teach or suggest each of the elements included in claim 27, and fails to teach or suggest each of the elements included in claim 46. Therefore, the proposed combination of Collins et al. and Sakakibara et al. fails to teach or suggest each of the elements included in claims 2, 4, 12, 15, 35, and 54.

Applicant's representatives fail to find in, and the Office Action fails to point out in Mitchell, a teaching or suggestion of the elements included in claims 2, 4, 12, 15, 35, and 54 and missing from the proposed combination of Collins et al. and Sakakibara et al. Thus, the proposed combination of Collins et al., Sakakibara et al., and Mitchell fails to teach or suggest each of the elements included in claims 2, 4, 12, 15, 35, and 54, and so the 35 U.S.C. § 103(a) rejection of claims 2, 4, 12, 15, 35, and 54 cannot stand.

For at least the reasons stated above, Applicant respectfully requests withdrawal of the 35 U.S.C. §103(a) rejection, and reconsideration and allowance of claims 2, 4, 12, 15, 35, and 54.

Claims 11, 50, and 57-61

Claims 11, 50, and 57-61 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Collins et al. and Sakakibara et al. (U.S. 4,681,712) as applied to claims 1, 13, 19, 23, 27, and 46 above, and further in view of Applicant Admitted Prior Art.

Applicant submits that the rejection is improper because attempts to use the disclosure of Applicant's own specification as "prior art" in rejecting claims 11, 50, and 57-61. On page 6, the Office Action states, "AAPR disclose a suitable material for absorber layer is called C-RAM" However, Applicant does not admit that any disclosure in the specification relating to "C-RAM" renders claims reciting "C-RAM" as admitted prior art. Applicant respectfully requests that the Office Action provide a reference that describes the subject matter as claimed in claims 11, 50, and 57-61, or provide evidentiary support as provided for in M.P.E.P. § 2144.03 that describes how the missing elements are present in the prior art.

Further, the Office Action on page 6 admits that the proposed combination of Collins et al. and Sakakibara et al. fails to disclose C-RAM material.

For at least these reasons, and for reasons stated above with respect to claims 1, 13, 19, 23, 27, and 46, from one of which each of claims 11, 50, and 57-61 depends, the proposed combination of Collins et al. and Sakakibara et al. fails to teach each of the elements included in claims 11, 50, and 57-61. Therefore the 35 U.S.C. § 103(a) rejection of claims 11, 50, and 57-61 cannot stand.

For at least the reasons stated above, Applicant respectfully requests withdrawal of the 35 U.S.C. § 103(a) rejection, and reconsideration and allowance of claims 11, 50, and 57-61.

Claims 6, 17, 25, 32, and 51

Claims 6, 17, 25, 32, and 51 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Collins et al. and Sakakibara et al. (U.S. 4,681,712) in view of Clement et al. (U.S. 6,809,254).

Claim 6 depends from claim 1, and so includes all of the elements recited in claim 1. Claim 17 depends from claim 13, and so includes all of the elements recited in claim 13. Claim 25 depends from claim 23, and so includes all of the elements recited in claim 23. Claim

32 depends from claim 27, and so includes all of the elements recited in claim 27. Claim 51 depends from claim 46, and so includes all of the elements recited in claim 46.

Applicant believes they have established that the proposed combination of Collins et al. and Sakakibara et al. fails to teach or suggest each of the elements included in each of claims 1, 13, 23, 27, and 46. Therefore, the proposed combination of Collins et al. and Sakakibara et al. fails to teach or suggest each of the elements included in claims 6, 17, 25, 32, and 51.

Applicant's representatives fail to find in, and the Office Action fails to point out in Clement et al., a teaching or suggestion of the elements included in claims 6, 17, 25, 32, and 51 and missing from the proposed combination of Collins et al. and Sakakibara et al. Thus, the proposed combination of Collins et al., Sakakibara et al., and Clement et al. fails to teach or suggest each of the elements included in claims 6, 17, 25, 32, and 51, and so the 35 U.S.C. § 103(a) rejection of claims 6, 17, 25, 32, and 51 cannot stand.

For at least the reasons stated above, Applicant respectfully requests withdrawal of the 35 U.S.C. § 103(a) rejection, and reconsideration and allowance of claims 6, 17, 25, 32, and 51.

Claim 26

Claim 26 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Collins et al. as modified, in view of Pierce (U.S. 5,431,974).

Applicant's representatives are unclear as to what is the basis for the "as modified" version of Collins et al. used in forming the rejection of claim 26 on page 7 of the Office Action. In addition, claim 26 depends from claim 23, and thus includes all of the elements recited in claim 23. The Office Action, for example on page 4, rejected claim 23 based on the proposed *combination* Collins et al. and Sakakibara et al., but fails to include the Sakakibara et al. reference in the rejection of claim 26.

In view of this, Applicant respectfully submits that for at least the reasons stated above with respect to claim 23, the proposed combination of Collins et al. and Pierce fails to teach or suggest each of the elements included in claim 26. As noted above, claim 26 depends from claim 23, and so includes all of the elements recited in claim 23. Applicant believes they have established that Collins et al. fails to teach or suggest each of the elements included in claim 23, and so fails to teach or suggest each of the elements included in claim 26.

Applicant's representatives fail to find in, and the Office Action fails to point out in Pierce, a teaching or suggestion of the elements included in claim 26 and missing from Collins et al. Thus, the proposed combination of Collins et al. and Pierce fails to teach or suggest each of the elements included in claim 26. Because the proposed combination of Collins et al. and Pierce fails to teach or suggest each of the elements in claim 26, the 35 U.S.C. § 103(a) rejection of claim 26 cannot stand.

For at least the reasons stated above, Applicant respectfully requests withdrawal of the 35 U.S.C. §103(a) rejection, and reconsideration and allowance of claim 26.

Reservation of Rights

Applicant does not admit that references cited under 35 U.S.C. §§ 102(a), 102(e), 103/102(a), or 103/102(e) are prior art, and reserves the right to swear behind them at a later date. Arguments presented to distinguish such references should not be construed as admissions that the references are prior art.

Conclusion

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney (612-371-2132) to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: MS Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 24th day of May, 2006.

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